THE GENUS OXYNA IN THE NEARCTIC REGION NORTH OF MEXICO

(Diptera: Tephritidae)

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The genus *Oxyna* R.-D. has not previously been recorded from the Nearctic region though evidence has shown that Marston Bates had associated with this genus one of the species included herein.[1] The recent opportunity of the writer to examine two Palaearctic species of *Oxyna*,[2] one of which was the genotype, has prompted this paper in which two previously described species and one described as new to science are assigned to this genus.

OXYNA Robineau-Desvoidy

Oxyna Robineau-Desvoidy, 1830, Mem. Acad. Sci. Inst., France 2: 755.

Generic characters—Head (Fig. 1, A): Higher than long, wider than high, width of front across median ocellus slightly wider than maximum width of eye and slightly more than half maximum head width; cheeks broad, over half maximum eye height. Frontale bare. Antennae rather short, not extending to anterior oral margin. Frons flattened or sometimes slightly elevated along median longitudinal area. Face rather long, being as long as or slightly longer than frons, with well developed antennal fovae. Oral opening large, straight on lateral margins, curved upward abruptly at anterior margin, projecting forward. Palpi very broad and long, projecting conspicuously beyond anterior oral margin. Proboscis very slender and elongate, the labella as long as or slightly shorter than maximum head length and much longer than maximum length of oral opening. One pair lower frontoorbitals; two pair upper frontoorbitals, the posterior pair weak, pale; one pair strong ocellars; one pair strong inner verticals; one pair pale, weak outer verticals which are about the length of postverticals and but little longer than the post-ocular cilia; one pair pale postverticals; postocular cilia moderately stout, pale, interspersed with fine, dark setae; genal well developed, pale.

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[1]Specimens received from the American Museum of Natural History and here described as *utahensis* n. sp. bore Bates determination label, "*Oxyna aterrima* Doane."

[2]Dr. E. M. Hering kindly presented the author with specimens of two species of *Oxyna*, *flavipennis* (Loew), and *nebulosa* (Wied.).

Thorax: Three pairs dorsocentrals, one pair anterior to transverse suture and about in a transverse line with the presuturals, the second pair well behind suture but ahead of a transverse line through supraalars, posterior pair about midway between supraalars and intraalars; one pair presuturals; one pair humerals; one pair supraalars; one pair postalars; one pair intraalars; two pairs marginal scutellars, one near apex, one near base; two pairs notopleurals, posterior pair rather weak, pale; one pair mesopleurals; one pair sternopleurals; one pair pteropleurals. Scutellum flattened above.

Legs: Fore femora with a row of long setae ventrally and scattered ones posterodorsally; middle tibiae with one strong apical spur; hind femora with one subapical, anterodorsal seta.

Wings (Fig. 1, B): Basic pattern of brown, with milky white and yellowish spots intermixed. Apex of first longitudinal vein not extending to center of wing (slightly behind), the vein setose along its entire length from humeral vein to apex. Two costal spines. Junction of veins two and three well behind apex of second basal cell and about in line with apex of anal cell; third vein bare or with a few short setae on underside near base. Lower apical angle of anal cell drawn out to a very short and inconspicuous point on sixth vein.

Abdomen: Broader and longer than thorax. Ovipositor sheath rounded dorsally, more flattened ventrally, tapering to a rather broad apex. Male genitalia rather small, the ventrally directed claspers rounded, tapering towards their apex; inner process with two pair of small subapical teeth.

Genotype: *Trypeta flavipennis* Loew.

The Nearctic species that are here assigned to *Oxyna* agree very closely in structure with the genotype but disagree by having only two pairs of dorsocentrals, the presutural pair being absent (this character was also found to be present in the Palaearctic species, *nebulosa* (Weid.), and in the much longer whitish setae in the parafrontal region. In wing form *aterrima* and *utahensis* are typical of the genus, but that of *palpalis* is somewhat narrower and more flattened on anterior margin.

Key to the Species

1. Wing with two broad brown bands one of which originates at the humeral crossvein and extends broadly along the costa to slightly beyond apex of stigma where it turns posteriorly crossing over both crossveins to wing margin, the other fills the wing apex from points slightly behind apices of second and fourth longitudinal veins; scutellum very pale yellow, nearly white ..... *palpalis*

– Wing without bands as above; scutellum dark yellow or brown 2

2. Femora black except narrowly at apices.....*utahensis*
– Femora yellowish except for a dark spot or stripe on the underside of hind pair .....*aterrima*

OXYNA ATERRIMA (Doane), n. comb.

Eurosta aterrima Doane, 1899, Jour. N. Y. Ent. Soc. 7 (2): 187. Pl. 4, fig. 2.

The original description was based on a single female from Colorado and the following additional notes are also based on one specimen of the same sex taken by Dr. J. M. Aldrich in Platte Canyon (North of Idlewild), Colorado, June 10, 1927. Dr. M. T. James compared this specimen with the type and could find no significant deviation in structure or coloration, however, the comparison did reveal that the body of the type is greased thus obscuring the pollen.

The statement by Doane that the palpi and proboscis are short is misleading, they are typical of the genus though not as pronounced in comparative size as in the genotype. Third antennal segment rounded on lower anterior corner but subacute on upper one. Occiput with a black spot just above the neck that emits a short ray on either side to outer vertical bristles. Thorax with yellowish and cinereous pollen intermixed with the latter restricted mainly to the lower half of pleura, metanotum, and lower half of postnotum. Scutellum with faint brownish markings around lateral bristles. Wings (Fig. 1, C). Abdomen black in ground color but densely cinereous and brownish pollinose, the latter tending to form a pair of large spots on each tergite. Ovipositor sheath 0.53 mm. long.[3]

Type in the Collection at the State College of Washington.
Distribution: Colorado.
Host plant: Unknown.

Oxyna utahensis Quisenberry, new species

Close to *aterrima* but easily distinguished from that species by the brown marks on the mesonotum and by the black femora

Male and female—Head: Mainly whitish; frontale and vertex yellow to brownish yellow; ocellar triangle and upper half of occiput black. Some of the whitish setae on parafrontals nearly as long as lower frontoorbitals. First and second antennal segments pale yellow, former with pale setae, latter with brown; third yellow or brownish yellow, about as long as broad, apex rounded or

[3]All ovipositor sheath measurements in this study were made from the dorsal side.

the upper anterior corner subacute, variable; arista dark brown. Proboscis brownish yellow, palpi pale yellow, tips darker, with short brown setae.

Thorax: Mesonotum 0.95-1.43 mm. long. Ground color black except for humeri and upper half of postnotum which are yellowish (notopleura sometimes yellow in greasy specimens). Cinereous pollinose except for following brownish areas: large spot on mesopleura; a pair of vittae on notum that extend from anterior margin to scutellum, or to a point about midway between the two pair of dorsocentrals, or these may be obscured by grayish pollen and appear only as elongate spots at anterior dorsocentral bristle; an inconspicuous spot at base of presutural bristles, this spot sometimes emitting an inconspicuous stripe posteriorly; and scutellum. The yellowish areas and brown color of scutellum is often obscured by cinereous pollen. The short setae are whitish, and longer and more dense on pleura. Bristles black except for whitish posterior notopleural and pteropleural.

Legs: Femora black except at apices, the dark area cinereous pollinose; remainder of legs yellow. The setae mainly whitish but with some pale yellow and brownish intermixed.

Wings (Fig. 1, E): Length 2.80 mm long. Much the same as in *aterrima* except there is no small whitish spot on costa midway between humeral vein and apex of auxiliary vein, the whitish spots tend to be larger and more confluent, and there is less brown in axillary region.

Abdomen: Shining. Tergum mainly brownish pollinose but with cinereous as follows: a narrow, inconspicuous, central stripe; lateral margins; and a narrow band on hind margins of tergites, that on apical tergite may in some cases be yellowish. Venter mainly brown, cinereous pollinose, with or without yellow on hind margins of sternites, variable. The setae are whitish, and longest on hind margin of apical tergite. Male genitalia dark brown, with fine pale pubescence. Ovipositor sheath 0.59 mm. long, shining black, with very fine reddish pubescence.

Types: *Holotype* male, *allotype* female, TEMPLE FORK, LOGAN CANYON, UTAH, April 25, 1934 (T. O. Thatcher); *paratypes*, one female and two males, Blacksmith Fork Canyon, Utah, June 4, 1935 (T. Thatcher), one male, Green Canyon, Utah, June 1, 1935 (G. F. Knowlton), one male, Logan Canyon, Utah, May 29, 1933 (G. F. Knowlton and E. W. Anthon) and one male, same date, but May 16, 1934 (T. O. Thatcher), in the American Museum of Natural History. Paratypes, two males, Lind, Washington, May 15, 1922 (M. C. Lane), in the United States National Museum.

Host plant: Unknown.

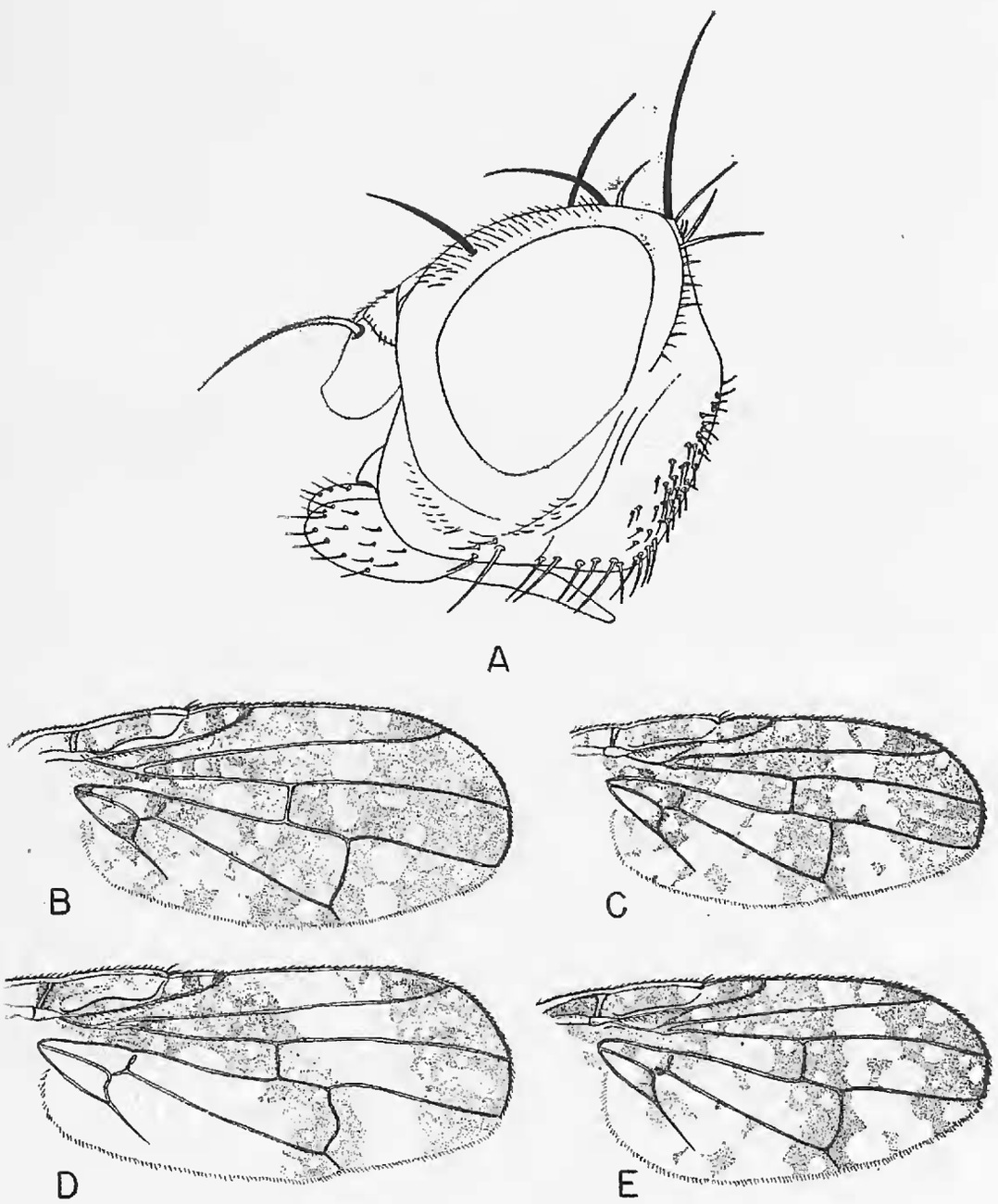

Fig. 1—A. Head of *O. flavipennis* (Loew), lateral view; B. wing of *O. flavipennis* (Loew); C. wing of *O. aterrima* (Doane); D. wing of *O. palpalis* (Coquillett); E. wing of *O. utahensis* Quisenberry.

OXYNA PALPALIS (Coquillett), n. comb.

Tephritis palpalis Coquillett, 1904, Invertebrata Pacifica. 1:30.

This species is easily distinguished from *aterrima* or *utahensis* by the distinctive wing pattern. The following additional notes include characters of the female which had not previously been described, the original description of the species being based on a single male specimen from Ormsby County, Nevada.

There are two or three pair of weak, whitish setae along the parafrontal area which are nearly the length of the lower fronto-orbitals. Thorax grayish pollinose except for some brownish on notum. Humeri, sometimes the area immediately below to anterior coxae, and sometimes the notopleural area, and wing base yellowish. Pteropleural and posterior notopleural bristles whitish. Scutellum wholly pale yellow, nearly white. Wings (Fig. 1, D) 2.80-4.20 mm. long; the yellowish spots in the stigma may be only faintly discernable; the apical brown band may extend rather far back on anterior costal margin so as to nearly touch the basal band. Dorsum of abdomen with some light brownish pollen intermixed with the cinereous; venter yellow, with cinereous and yellowish pollen, the former sometimes obscuring yellowish color; pleura yellowish. Ovipositor sheath 0.59-0.84 mm. long, pale amber or yellowish brown in color, bare except for some very fine scattered hairs. Grayish pollen sometimes obscures the pale yellowish color of male genitalia.

Type in the United States National Museum.

Distribution: Nevada, California and Idaho.

Host plant: Unknown.

Material examined included two females and one male, no data, from the American Museum of Natural History; one male, Yellowstone (Roosevelt Lodge), California, July 1, 1938 (E. C. Van Dyke), from the California Acadaemy of Sciences; one female, June 4, 1927, Hollister, Idaho, and one male labeled, "Ormsby County, Nevada, July 6 (Baker), cotype." The Nevada male was received in a shipment of tephritids from the Stanford University collection.

Dr. Alan Stone checked the type for the author and reports that it bears the same information as regards the date and collector as was found on the label of the previous mentioned Nevada specimen, the other information being as originally given by Coquillett. The "cotype" designation is treated as a probable error in labeling since Coquillett mentions only one specimen in the original description.